AMENDMENTS TO THE CLAIMS

1. (Currently Amended) An optical recording method comprising the steps of:

reading recommended write strategy parameters and a recommended asymmetry value from an optical recording medium on which the recommended write strategy parameters and recommended asymmetry value have been recorded;

determining a pulse width of write strategy parameters ~~and an asymmetry value~~ to be used in recording, based on the recommended write strategy parameters~~, the recommended asymmetry value,~~ and characteristics of ~~the~~an optical system of ~~the~~an optical pickup of ~~the~~an optical recording device used in recording, ~~and~~and the determined pulse width being calculated using a predetermined calculation formula;

determining an asymmetry value to be used in recording, based on the recommended write strategy parameters and characteristics of the optical system of the optical pickup of the optical recording device used in recording, the determined asymmetry value being calculated using a predetermined calculated formula;

determining an optimal recording power based upon the ~~recommended~~determined pulse width of the write strategy parameters and the determined asymmetry value ~~thus determined~~; and

writing to the optical recording medium by use of the optical recording device, using ~~the~~a write strategy having both the determined pulse width and the optimal recording power thus determined[[,]]

~~wherein the characteristics of the optical system of the optical pickup includes at least one of a wavelength of a laser beam of the optical recording device and a numerical aperture of an objective lens of the optical recording device~~.

2. (Currently Amended) The optical recording method of claim 1, wherein:

the write strategy is a multiple-pulse type of write strategy; and

the step of determining ~~determines~~a pulse width includes calculating a leading pulse width as the pulse width of the write strategy parameters for recording each mark, based on a ratio of a recommended leading pulse width parameter of the write strategy for recording each mark included in the recommended write strategy parameters with respect to the square of the recommended leading pulse width parameter of the write strategy for recording the shortest mark included in the recommended write strategy parameters.

3. (Original) The optical recording method of claim 2, wherein said step of determining is carried out by a computation using a formula predetermined for the optical recording device used in recording.

4. (Original) The optical recording method of claim 3, wherein in regard to the write strategy for recording each mark of the write strategy, the leading pulse width that minimizes reproducing jitter is determined experimentally, a formula is generated such that the experimentally determined leading pulse width is the result of a calculation or a value approximating the result of the calculation, and

the generated formula is used in said step of determining.

5. (Previously Presented) The optical recording method of claim 3, wherein the formula is expressed as

$$iTF = Ki \cdot (iTP/1TP\text{^}2) + Ci$$

(where iTF is the pulse width of the leading pulse in the write strategy to be used in recording an i-th shortest mark,

iTP is the pulse width of the leading pulse in the recommended write strategy parameters for recording the i-th shortest mark,

1TP is the pulse width of the leading pulse in the recommended write strategy parameters for recording the shortest mark, and

Ki and Ci are constants for determining the write strategy to be used to record the i-th shortest mark).

6. (Previously Presented) The optical recording method of claim 3, wherein:

the reading step reads the recommended wavelength from the optical recording medium; and

the formula is expressed as

$$iTF = Ki \cdot (iTP/1TP\text{^}2) + Ci + Di \times |\lambda 2 - \lambda 1|$$

(where iTF is the pulse width of the leading pulse in the write strategy to be used

in recording an i-th shortest mark,

iTP is the pulse width of the leading pulse in the recommended write strategy parameters for recording the i-th shortest mark,

1TP is the pulse width of the leading pulse in the recommended write strategy parameters for recording the i-th shortest mark,

λ2 is the wavelength of a laser beam of the optical recording device used in recording,

λ1 is a recommended wavelength, and

Ki, Ci, and Di are constants for determining the write strategy to use to record the i-th shortest mark).

7. (Previously Presented) The optical recording method of claim 3, wherein:

the step of reading reads the recommended wavelength from the optical recording medium; and

the formula is expressed as

iTF = Ki·(iTP/1TP^2) + Ci, when the value of |λ2 - λ1| is equal to or less than a predetermined value, and

iTF = Ki·(iTP/1TP^2) + Ci + Di × |λ2 - λ1|, when the value of |λ2 - λ1| is greater than the predetermined value,

(where iTF is the pulse width of the leading pulse in the write strategy to be used in recording an i-th shortest mark,

iTP is the pulse width of the leading pulse in the recommended write strategy parameters for recording the i-th shortest mark,

1TP is the pulse width of the leading pulse in the recommended write strategy parameters for recording the i-th shortest mark,

λ2 is the wavelength of a laser beam of the optical recording device used in recording,

λ1 is a recommended wavelength, and

Ki, Ci, and Di are constants for determining the write strategy to be used to record the i-th shortest mark).

8. (Previously Presented) The optical recording method of claim 6, wherein Di is the same for every i.

9. (Previously Presented) The optical recording method of claim 5, wherein the leading pulse width of the write strategy used in recording a fourth shortest mark is also used in all the write strategies from the write strategy used in recording a fifth shortest mark to the write strategy used in recording a longest mark.

10. (Previously Presented) The optical recording method of claim 1, wherein:

the step of reading reads a recommended wavelength value from the optical recording medium; and

the step of determining performs a determination based on the recommended wavelength value and the wavelength of a laser beam of the optical recording device used in recording.

11. (Previously Presented) The optical recording method of claim 1, wherein:

the determining step calculates an asymmetry value for use in recording based on the recommended asymmetry value and the numerical aperture of the objective lens of the optical recording device used in recording; and

the step of writing performs writing by use of the calculated asymmetry value.

12. (Original) The optical recording method of claim 11, wherein:

if the recommended asymmetry value recorded on the optical recording medium is β1, the numerical aperture of the objective lens used for determining the recommended value is NA1, and the numerical aperture of the objective lens of the optical recording device used in recording is NA1, then the asymmetry value β2 used in recording is calculated by the formula

$$\beta 2 = \beta 1 + E \times (NA2 - NA1)$$

13. (Currently Amended) An optical recording device with an optical pickup having an optical system for recording and reproducing, comprising:

a reading means for reading recommended write strategy parameters and a recommended asymmetry value from an optical recording medium on which the recommended write strategy parameters and recommended asymmetry value have been recorded;

a determining means for determining a pulse width of write strategy parameters~~and an asymmetry value~~ to be used in recording, based on the recommended write strategy parameters~~, the recommended asymmetry value,~~ and characteristics of the optical system of the optical pickup, ~~and~~and the determined pulse width being calculated using a predetermined calculation formula, and for determining an asymmetry value to be used in recording, based on the recommended write strategy parameters and characteristics of the optical system of the optical pickup of the optical recording device used in recording, the determined asymmetry value being calculated using a predetermined calculated formula;

a determining means for determining an optimal recording power based upon the ~~recommended~~determined pulse width of the write strategy parameters and the determined asymmetry value~~ thus determined~~; and

a writing means for writing to the optical recording medium, using ~~the~~a write strategy having both the determined pulse width and the optimal recording power thus determined~~,~~

~~wherein the characteristics of the optical system of the optical pickup includes at least one of a wavelength of a laser beam of the optical recording device and a numerical aperture of an objective lens of the optical recording device~~.

14. (Currently Amended) The optical recording device of claim 13, wherein:

the write strategy is a multi-pulse type of strategy; and

the determining means for determining a pulse width calculates a leading pulse width as the pulse width of the write strategy parameters for recording each mark, based on a ratio of a recommended leading pulse width parameter of the write strategy for recording each mark included in the recommended write strategy parameters with respect to the square of the recommended leading pulse width parameter of the write strategy for recording the shortest mark included in the recommended write strategy parameters.

15. (Original) The optical recording device of claim 14, wherein the determining means carries out a computation using a formula predetermined for the optical recording device used in recording.

16. (Original) The optical recording device of claim 15, wherein, in regard to the write strategy for recording each mark of the write strategy, the leading pulse width that minimizes reproducing jitter is determined experimentally, a formula is generated such that the experimentally determined leading pulse width is the result of a calculation or a value

approximating the result of the calculation, and the determining means uses the formula to carry out the calculation.

17. (Previously Presented) The optical recording method of claim 7, wherein Di is the same for every i.

18. (Previously Presented) The optical recording method of claim 6, wherein the leading pulse width of the write strategy used in recording a fourth shortest mark is also used in all the write strategies from the write strategy used in recording a fifth shortest mark to the write strategy used in recording a longest mark.

19. (Previously Presented) The optical recording method of claim 7, wherein the leading pulse width of the write strategy used in recording a fourth shortest mark is also used in all the write strategies from the write strategy used in recording a fifth shortest mark to the write strategy used in recording a longest mark.

20. (Currently Amended) An optical recording method comprising the steps of:

reading recommended write strategy parameters from an optical recording medium on which the recommended write strategy parameters including recommended pulse width value have been recorded;

determining a pulse width of write strategy parameters including a leading pulse width parameter to be used in recording, based on the recommended pulse width value and characteristics of ~~the~~an optical system of ~~the~~an optical pickup of ~~the~~an optical recording device

used in recording, the determined pulse width being calculated using a predetermined calculation formula; and

writing to the optical recording medium by use of the optical recording device, using ~~the~~a write strategy having the determined pulse width~~thus determined~~

~~wherein the characteristics of the optical system includes at least one of a wavelength of a laser beam of the optical recording device and a numerical aperture of an objective lens of the optical recording device~~.

21. (Currently Amended) The optical recording method of claim 20, wherein:

the write strategy is a multiple-pulse type of write strategy; and

the step of determining a pulse width includes calculating~~determines~~ a leading pulse width as the pulse width of the write strategy parameters for recording each mark, based on a ratio of a recommended leading pulse width parameter of the write strategy for recording each mark included in the recommended write strategy parameters with respect to the square of the recommended leading pulse width parameter of the write strategy for recording the shortest mark included in the recommended write strategy parameters.

22. (Previously Presented) The optical recording method of claim 21, wherein said step of determining is carried out by a computation using a formula predetermined for the optical recording device used in recording.

23. (Previously Presented) The optical recording method of claim 22, wherein in regard to the write strategy for recording each mark of the write strategy, the leading pulse width that

minimizes reproducing jitter is determined experimentally, a formula is generated such that the experimentally determined leading pulse width is the result of a calculation or a value approximating the result of the calculation, and

the generated formula is used in said step of determining.

24. (Previously Presented) The optical recording method of claim 22, wherein the formula is expressed as

$$iTF = Ki \cdot (iTP/1TP\text{^}2) + Ci$$

(where iTF is the pulse width of the leading pulse in the write strategy to be used in recording an i-th shortest mark,

iTP is the pulse width of the leading pulse in the recommended write strategy parameters for recording the i-th shortest mark,

1TP is the pulse width of the leading pulse in the recommended write strategy parameters for recording the shortest mark, and

Ki and Ci are constants for determining the write strategy to be used to record the i-th shortest mark).

25. (Previously Presented) The optical recording method of claim 22, wherein:

the reading step reads the recommended wavelength from the optical recording medium; and

the formula is expressed as

$$iTF = Ki \cdot (iTP/1TP\text{^}2) + Ci + Di \times |\lambda 2 - \lambda 1|$$

(where iTF is the pulse width of the leading pulse in the write strategy to be used in

recording an i-th shortest mark,

iTP is the pulse width of the leading pulse in the recommended write strategy parameters for recording the i-th shortest mark,

1TP is the pulse width of the leading pulse in the recommended write strategy parameters for recording the i-th shortest mark,

$\lambda 2$ is the wavelength of a laser beam of the optical recording device used in recording,

$\lambda 1$ is a recommended wavelength, and

Ki, Ci, and Di are constants for determining the write strategy to use to record the i-th shortest mark).

26. (Previously Presented) The optical recording method of claim 22, wherein:

the step of reading reads the recommended wavelength from the optical recording medium; and

the formula is expressed as

$iTF = Ki \cdot (iTP/1TP\text{^}2) + Ci$, when the value of $|\lambda 2 - \lambda 1|$ is equal to or less than a predetermined value, and

$iTF = Ki \cdot (iTP/1TP\text{^}2) + Ci + Di \times |\lambda 2 - \lambda 1|$, when the value of $|\lambda 2 - \lambda 1|$ is greater than the predetermined value,

(where iTF is the pulse width of the leading pulse in the write strategy to be used in recording an i-th shortest mark,

iTP is the pulse width of the leading pulse in the recommended write strategy parameters for recording the i-th shortest mark,

1TP is the pulse width of the leading pulse in the recommended write strategy parameters for recording the i-th shortest mark,

λ2 is the wavelength of a laser beam of the optical recording device used in recording,

λ1 is a recommended wavelength, and

Ki, Ci, and Di are constants for determining the write strategy to be used to record the i-th shortest mark).

27. (Previously Presented) The optical recording method of claim 24, wherein the leading pulse width of the write strategy used in recording a fourth shortest mark is also used in all the write strategies from the write strategy used in recording a fifth shortest mark to the write strategy used in recording a longest mark.

28. (Previously Presented) The optical recording method of claim 20, wherein:

the step of reading reads a recommended wavelength value from the optical recording medium; and

the step of determining performs a determination based on the recommended wavelength value and the wavelength of a laser beam of the optical recording device used in recording.

29. (Previously Presented) The optical recording method of claim 20, wherein:

the step of reading reads a recommended asymmetry value;

the determining step calculates an asymmetry value for use in recording based on the recommended asymmetry value and the numerical aperture of the objective lens of the optical recording device used in recording; and

the step of writing performs writing by use of the calculated asymmetry value.

30. (Previously Presented) The optical recording method of claim 20, wherein:

if the recommended asymmetry value recorded on the optical recording medium is $\beta 1$,

the numerical aperture of the objective lens used for determining the recommended value is NA1, and

the numerical aperture of the objective lens of the optical recording device used in recording is NA2, then

the asymmetry value $\beta 2$ used in recording is calculated by the formula

$$\beta 2 = \beta 1 + E \times (NA2 - NA1).$$

31. (Currently Amended) An optical recording device with an optical pickup having an optical system for recording and reproducing, comprising:

a reading means for reading recommended write strategy parameters including a recommended pulse width value from an optical recording medium on which the recommended write strategy parameters have been recorded;

a determining means for determining a pulse width of write strategy parameters including a pulse width value to be used in recording, based on the recommended pulse width value, and characteristics of ~~the~~an optical system of ~~the~~an optical pickup, the determined pulse width being calculated using a predetermined calculation formula; and

a writing means for writing to the optical recording medium, using ~~the~~a write strategy having the determined pulse width ~~thus determined,~~

~~wherein the characteristics of the optical system includes at least one of a wavelength of a laser beam of the optical recording device and a numerical aperture of an objective lens of the optical recording device~~.

32. (Currently Amended) The optical recording device of claim 31, wherein:

the write strategy is a multi-pulse type of strategy; and

the determining means for determining a pulse width calculates a leading pulse width as the pulse width of the write strategy parameters for recording each mark, based on a ratio of a recommended leading pulse width parameter of the write strategy for recording each mark included in the recommended write strategy parameters with respect to the square of the recommended leading pulse width parameter of the write strategy for recording the shortest mark included in the recommended write strategy parameters.

33. (Previously Presented) The optical recording device of claim 32, wherein the determining means carries out a computation using a formula predetermined for the optical recording device used in recording.